Department of Health
and the Welsh Office

MC0021

Health Technical Memorandum

Building components

Cubicle curtain track

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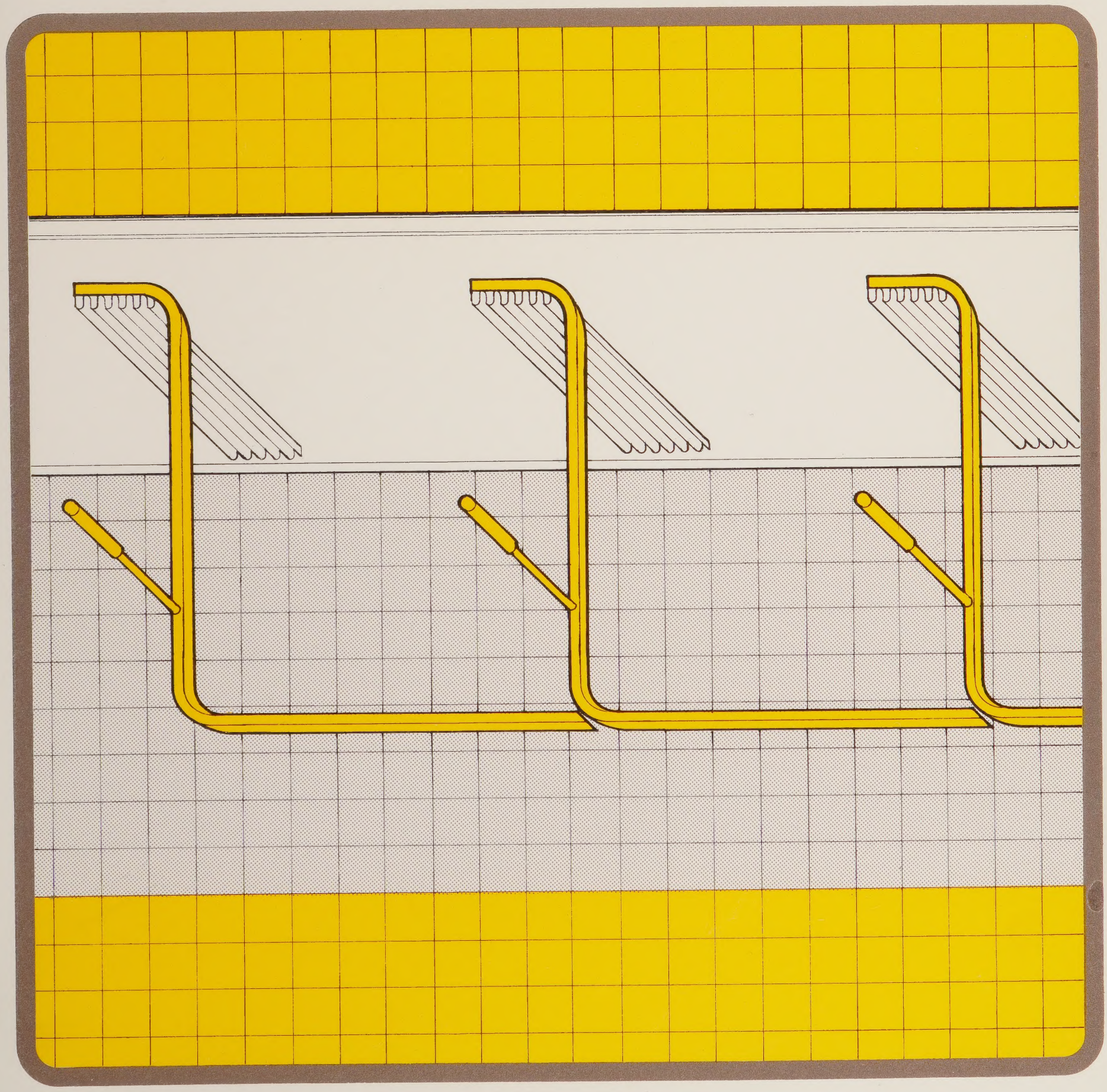

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Health Technical Memorandum

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Cubicle curtain track

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Contents

1 Introduction

1.1 Background
1.2 Scope and status
1.3 Relationship to other data
1.4 Terminology

2 Design and specification notes

2.1 Track height
2.2 Cubicle layouts
2.3 Track suspension
2.4 Curtains and curtain changing
2.5 Builders work
2.6 Maintenance

3 Performance requirements

3.1 Constituent parts
3.2 Constituent materials
3.3 Exposed surfaces
3.4 Fire propagation
3.5 Strength
3.6 Electrostatic charges
3.7 Quietness and smoothness in operation
3.8 Curtain hanging and changing
3.9 Resistance to mechanical wear
3.10 Biological control
3.11 Cleaning and disinfection

4 Site fixing practice

4.1 Setting out
4.2 Handling and storage
4.3 Fixings
4.4 Programme

References

1 Introduction

1.1 Background

This is one of a series of *Health Technical Memoranda* which provide specification and design guidance on building components for health buildings which are not adequately covered by current British Standards.

The series supersedes all Component Data Base Mk.3 (and earlier Manufacturers Data Base) information.

The numbers and titles of the HTM in the series are:

54 Building components and user manual
55 Windows
56 Partitions
57 Internal glazing
58 Internal doorsets
59 Ironmongery
60 Ceilings
61 Flooring
62 Demountable storage system
63 Fitted storage system
64 Sanitary assemblies
65 Signs
66 Cubicle curtain track
67 Laboratory fitting out systems
68 Duct and panel assemblies
69 Protection
70 Fixings

The technical information in this series is the result of research and development funded by the Department as part of collaborative working arrangements over a number of years between the Department, the NHS, and Industry through the medium of the Component Data Base.

Any enquiries regarding the technical content of this HTM should be directed to Health Building Directorate, Department of Health, Euston Tower, 286 Euston Road, London NW1 3DN.

1.2 Scope and status

This HTM contains guidance on the design and specification of cubicle curtain track in health buildings.

Its content does not diminish either manufacturer responsibility for fitness for purpose of products, or design team responsibility for selection and application of products to meet project requirements.

1.3 Relationship to other data

The main sources of data used in the preparation of this HTM are listed in the References section.

This HTM was prepared in March 1984 and revised in June 1988, and is based on data current at that date. Readers should ensure that they use the latest edition of all building legislation, British Standards, etc.

1.4 Terminology

In this HTM the following definitions apply:

- Cubicle curtain track system – a component assembly to support curtains forming cubicles.
- Track – the horizontal member which supports the runners and the curtains.
- Suspended track – track fixed at a level significantly below the ceiling soffit.
- Ceiling fixed track – track fixed directly to the ceiling soffit.
- Track height – dimension from finished floor level to underside of track.
- Parking of curtains – the drawing back and bunching of curtains to pre-determined positions when not in use.
- Loading device – a device to facilitate the removal and replacement of curtains.

2 Design and specification notes

2.1 Track height

There are a number of factors to be considered in determining curtain track height and the related form of suspension or direct fixing to the ceiling.

One of the most important considerations is the effect of curtains, whether drawn or parked, on natural and artificial lighting.

Design teams should also consider the appearance of track and curtain configurations within and around the cubicles.

For suspended track installations track height will normally be 2100mm within a ceiling height of 2700mm.

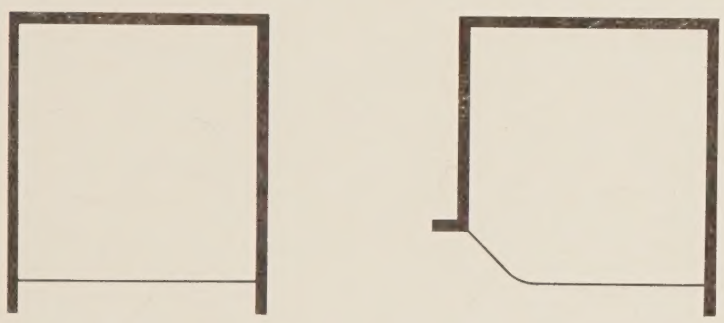
The assumed ceiling height for suspended track installations is 4500mm maximum and 2400mm minimum.

Ceiling fixed track applications are normally limited to ceiling heights of up to 2700mm.

2.2 Cubicle layouts

Examples of single and multiple bay cubicle layouts and their relationship to walls or partitions are given below.

Single bay cubicles



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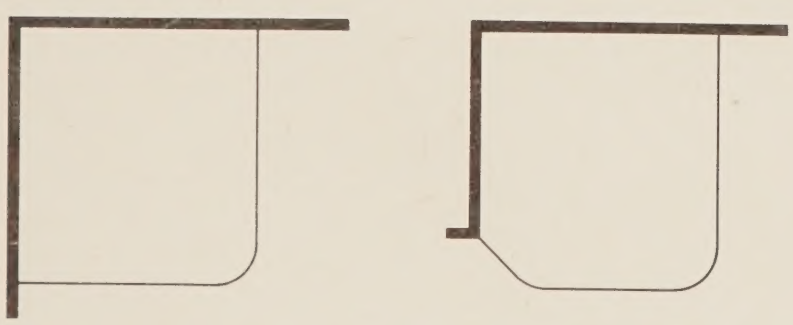

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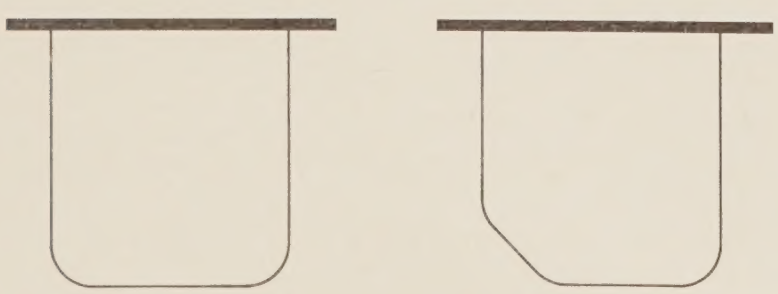

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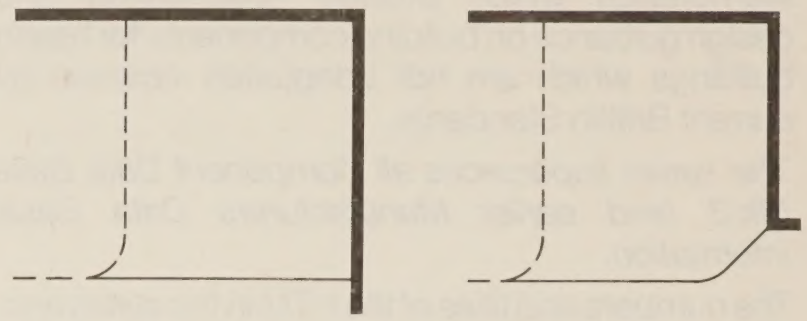
Multiple bay cubicles



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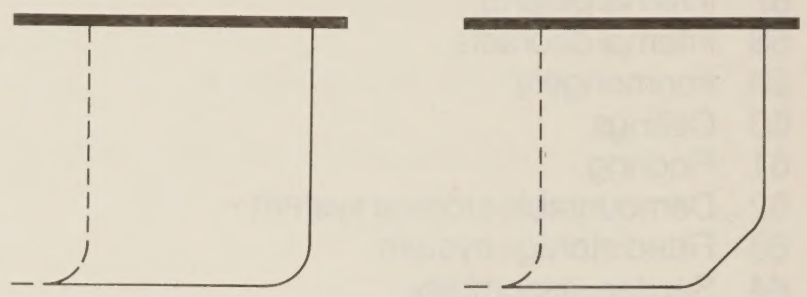


Two sided

Space within and around cubicles should take account of the dimensional guidance contained in the Building Note 'Common Activity Spaces' issued by DHSS.

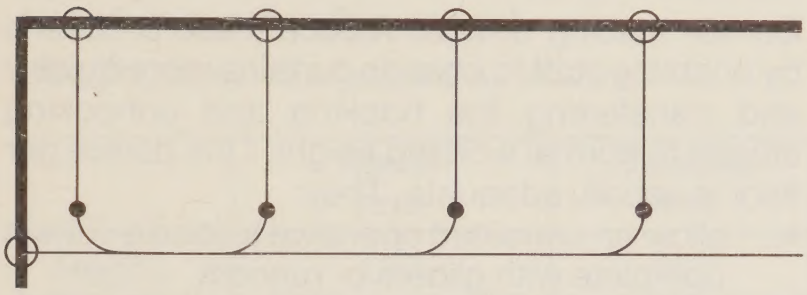
2.3 Track suspension

In both suspended and ceiling fixed track systems the spacing and location of fixing points should be strictly in accordance with the manufacturers' recommendations.

Suspended track must be restrained to prevent horizontal movement by:

- direct fixing of track to flank walls or partitions
- tie bars
- V-hangers fixed to the ceiling
- any combination of these as appropriate to the layout.

Some examples are given below:



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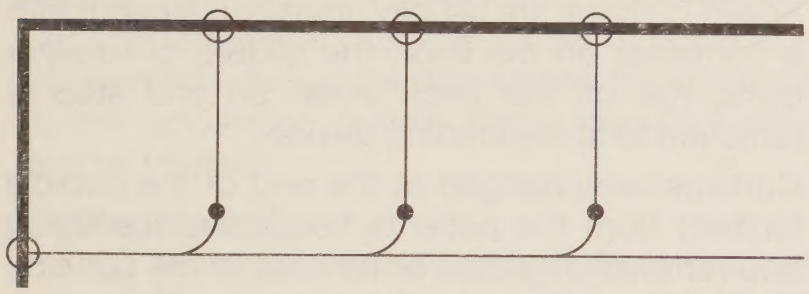
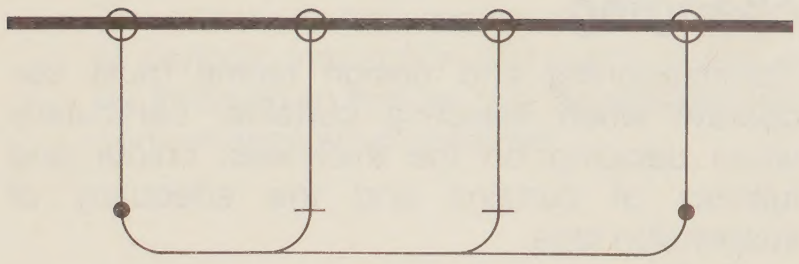


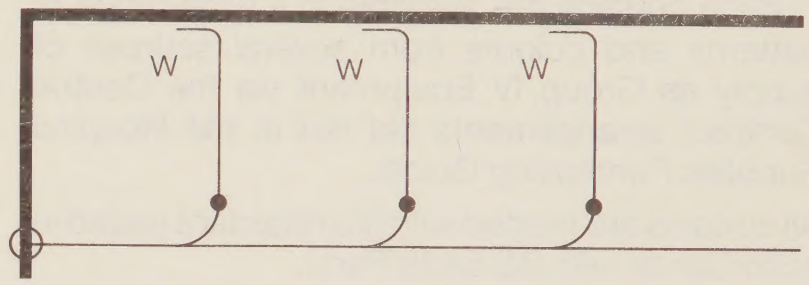
Wall fixings at one end of front rail (with tiebar where necessary) provide adequate lateral support for up to eight cubicles. Beyond that, the track manufacturer should be consulted.

Legend

- ● vertical hanger
- – V-hanger
- ○ wall fixing
- TB tie bar (track without gliders/runners)
- W wall bracket



V-hangers provide lateral restraint on inner tracks of up to three cubicles when no wall fixing on front rail can be provided. Beyond three cubicles, the track manufacturer should be consulted.



Where the arrangement of windows, engineering services and bedhead units permit, curtains may be parked on an extension of the track fixed parallel to a wall and supported by a wall bracket. This support is as effective as the normal wall fixing which is used where track meets wall at 90°.

Note that V-hangers have a very limited application. A tie bar with wall fixing provides much more effective lateral restraint.

Tie bars comprise lengths of track which are not fitted with gliders or runners; this ensures consistency of appearance and standardisation of fittings.

Ceiling-fixed track needs no restraint to prevent horizontal movement.

Hangers supporting track are generally of rod construction. However, wire hangers are preferred when the hanger is longer than 1000mm or when raking hangers must be used because a ceiling fixing is not practical (eg a weak membrane in an existing ceiling).

Obtain advice from the manufacturer whenever unusual project conditions apply.

2.4 Curtains and curtain changing

Commissioning and design teams must co-operate when selecting curtains, particularly when deciding on the thickness, colour and fullness of curtains and the adequacy of suspension tape.

Earlier design decisions regarding bunching and parking of curtains and the transmission of light and ventilation should be passed on to the commissioning team.

For ceiling fixed tracks the transmission of light and ventilation is of particular importance and will involve scalloping or netting (which may be difficult to clean) from 2100mm to ceiling level.

Cubicle curtains are available in a wide range of patterns and colours from several sources of supply as Group IV Equipment via the Central Contract arrangements set out in the Hospital Supplies Purchasing Guide.

All curtains are treated with fire retardant tested in accordance with BS 5438 Part I.

Printed curtains are 1200mm wide and 2000mm high and colour woven curtains are 1830mm wide and 2000mm high.

The amount of fullness can vary from 5 per cent to 25 per cent depending on hospital policy.

Curtain parking

A key consideration in detailing layouts is the parked position of cubicle curtains, either along a wall or at right angles to it.

Curtains parked along a wall allow maximum observation, but are less easy to draw, and call for careful detailing to avoid obstruction of adjacent engineering service outlets.

Curtains parked at right angles to a wall reduce observation but, by the same token, increase privacy. They are easier to draw and less likely to obstruct adjacent engineering terminals.

Parked curtains will obviously take up some of the working space of bed areas and the parking space will vary depending on the fullness of the material.

As a general rule, track required to park the curtains will be about 15 per cent of track length when cotton fabric is used.

For example, a bed space 2900mm deep and 2500mm long, assuming curtains for one side and the end are to be parked, will require 810mm of track for parking.

Part of the curtain can be parked behind the bedhead but it is unlikely that projection of the curtain from the wall can be eliminated entirely. If the health building authority has a policy which includes tightly bunching the curtains, then the provision of extra track solely for curtain parking can be reduced.

Curtain changing

Domestic services staff are usually responsible for changing curtains. Speed and efficiency of the procedure are of great importance to the smooth running of the department which should minimise:

- loss of cubicle function
- hindrance to other user activities by restricting or blocking circulation spaces
- disturbance of patients
- operator fatigue and the associated risk of accidents when working at or near ceiling height, and
- risk of cross-infection due to movement of soiled curtains.

Curtain loading devices reduce these problems by enabling staff to change curtains more quickly and transferring the hooking and unhooking stages to normal working height. One device per floor is usually adequate. They:

- allow an untrained operative to load a curtain complete with gliders or runners
- are for use on suspended or (with minor adaptation) on ceiling fixed track
- give full control of feed-on of gliders or runners.

Soiled curtains are usually unloaded straight into a container on the floor, the gliders or runners being run off the track when an end stop is removed to fit the loading device.

Curtains are changed at the end of the cubicle furthest from the patients head, and the fitting and removal of gliders or runners to the curtains takes place entirely outside the patient area.

The accuracy and frequency with which hooks or buttons are spaced along the operative width of the curtain is a key factor in ensuring that the curtain will draw easily around track bends. This will be achieved if the hooks or buttons are fitted to the curtain before delivery to the cubicle. The use of curtains with predetermined hook or button positions should be considered.

2.5 Builders work

Wall fixings

Cubicle curtain track will normally be plugged and screwed to masonry walls, concrete columns and the like by the fixer as part of the installation work. All builders work preparation must be put in hand at the appropriate stage of construction of hollow plasterboard partitions.

Fixings to hollow partitions require special noggings running horizontally and secured to the studs.

These noggings may be of softwood or metal.

The noggings should be located directly behind and in contact with the plasterboard facings to avoid distortion of the latter when the curtain track fixings are pulled up tight.

Nogging sizes required are as follows:

	Metal mm	**Timber mm**
Height	100	100
Thickness	0.6 channel	32
Length	to lap face of studs at both ends	600 nominal between studs

Vertical location of noggings of either material in the partition should be determined by reference to the appointed curtain track manufacturer's product details.

Ceiling fixings

Fixings to suspended ceilings will always require preparatory builders work which should be installed at the appropriate stage of ceiling construction.

As a general principle, noggings should be placed directly above and in contact with the ceiling membrane and either:

- secured to ceiling panel grid members which may require additional ceiling suspension members to take the load
- or, exceptionally, suspended direct from the structural soffit above.

Noggings will almost always need to be of timber as:

- a considerable amount of cutting and fitting will be required to suit each ceiling design
- they will need to be located and sized to give the necessary dimensional tolerance for fixing cubicle curtain track (approximately 100mm in any direction in the case of suspension members).

2.6 Maintenance

The manufacturer's recommendations in respect of periodic inspection and maintenance should be followed to ensure that acceptable levels of performance are maintained.

3 Performance requirements

3.1 Constituent parts

Each cubicle curtain track system should comprise:

- track
- wall fixing devices
- direct to ceiling fixings
  - vertical hangers
  - V-hangers
- bay connectors
- stop ends
- curtain loading device
- gliders or runners
- hooks or buttons.

3.2 Constituent materials

All parts must be of corrosion resistant materials. No constituent part should contain material:

- known or reasonably believed to constitute a health hazard under normal conditions of use
- which will give off toxic products in the event of a fire.

3.3 Exposed surfaces

All exposed surfaces should be pre-finished in satin silver or white (00-E.55) except gliders and runners and other small parts which may be of uncoloured or translucent plastic materials.

Where other colours are offered these should fall within the following BS4901 range:

00-A.01, 00-A.03, 00-A.05, 00-A.09, and 00-A.53.

All surface finishes should be capable of withstanding the range of temperature and humidity conditions encountered in health buildings.

3.4 Fire propagation

All structural parts of a system should be non-combustible as defined in BS476 Part 4 but combustible materials may be employed for small non-structural parts.

3.5 Strength

Track suspension (braced or un-braced) should have breaking strength of not less than 180 kg between upper and lower fixing points. The weakest components in the system should be the gliders or runners.

3.6 Electrostatic charges

No system should, to any appreciable extent, develop or shed electrostatic charges.

3.7 Quietness and smoothness in operation

No quantifiable criteria are available for quietness and smoothness in operation but systems should be selected with these two important requirements in mind.

Particular consideration should be given to the operation of gliders or runners at approximately 100mm centres around bends of minimum radius.

During installation, care must be taken to avoid stepped joints where it is necessary to join track.

3.8 Curtain hanging and changing

Gliders or runners should be designed to enable attachment of curtains by hooks or buttons.

Each system should include a device which will facilitate the loading or unloading of curtains from the track. (see 2.4)

3.9 Resistance to mechanical wear

Gliders and runners and track wearing surfaces should be capable of withstanding at least 20,000 cycles of curtain movement without appreciable loss of quietness or smoothness in operation, or visible wear.

3.10 Biological control

No system should contain material capable of supporting the growth of bacteria, fungi etc., or encouraging the harbourage of insects or mites.

3.11 Cleaning and disinfection

The design, materials and workmanship of a system should be such that when installed it will not generate dust or dirt. The construction should be such that the system may be effectively cleaned and that inaccessible areas are eliminated. It should be capable of withstanding:

- cleaning with hot water containing mild non-abrasive detergent as part of a regular cleaning programme
- disinfection by any of the disinfectants in general use in the NHS in suitably diluted form.

4 Site fixing practice

4.1 Setting out

The main contractor should be responsible for setting out all fixing points and for ensuring that noggings (see 2.5) are suitably sized, located, and fixed during the erection of partitions and ceilings.

4.2 Handling and storage

The cubicle curtain track systems should be delivered to site by the manufacturer and fixed by him or by his appointed fixer.

Curtain tracks are often awkward to handle on site because they are bent to the required shape at works. They are therefore delivered with temporary bracing and protective wrappings. Preference should be given to systems designed on piece-part principles which obviate these delivery and handling difficulties.

Adequate provision must be made for secure weathertight storage of the tracks and fittings.

4.3 Fixings

Timber noggings in hollow partitions and suspended ceilings should normally be supplied by the main contractor and fixed by the respective sub-contractors.

Metal noggings in hollow partitions should be supplied and fixed by the sub-contractor as part of the partitioning system.(see 2.5)

4.4 Programme

The aim should be to fix cubicle curtain tracks in a single phase operation when all ceilings, walls and partitions are complete including site decoration.

References

Other DoH data

Health Technical Memoranda in this Building Components series:

55 Windows
56 Partitions
60 Ceilings

Building Note 'Common Activity Spaces'

Hospital Supplies Purchasing Guide
– Central Contract Arrangements

Statutory legislation

The Building Regulations – compartmentation

British Standard Specifications

BS476: Part 4 – Non combustibility Test for Materials
BS4901: Plastics colours for building purposes
BS5438: Test 1 – Fire retardant test for curtains

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